

NEW PROJECTS (PLAN) INITIATED DURING THE YEAR 2015-16

1.	<p>Adaptation and mitigation measures in relation to shortening of <i>jhum</i> cycle vis-à-vis soil nutrient status and productivity in different traditional systems of Nagaland. Project Code: RFRI/2015-16/SCD-1</p>	<p>Dr. Krishna Giri, Scientist -B</p>	<p>A preliminary reconnaissance survey from 31-08-2015 to 04-09-2015 was conducted in Kohima district of Nagaland. Four villages of Kohima district were surveyed and Khonoma village was selected for further study. A meeting was conducted with Advisor, Chairman and Executive Secretary, Khonoma Nature Conservation & Tragopan Sanctuary (KNCTS) Trust and discussion was made about traditional fallow management practices being practiced by the villagers. As per the survey and discussion alder (<i>Alnus nepalensis</i>) and leguminous pulse (cover crops) based fallow management practices exist in Khonoma Village. Therefore, a thorough investigation on the above mentioned fallow management practices will be undertaken in order to achieve the set objectives.</p>
2.	<p>Assessment of selected ecosystem services and their inter-linkage with human wellbeing in Dibru-Saikhowa Biosphere Reserve, Assam. Project Code: RFRI/2015-16/E&B-2</p>	<p>Sh Ajay Kumar Scientist -B</p>	<p>Population residing in and around biosphere reserves depends on the forest for the various ecosystem services for their daily livelihood need, income generation and for meeting their aesthetic, spiritual, religious, heritage and recreational values. Resource dependency of various stakeholders for food, water, raw material, and genetic, medicinal and ornamental resources are the major indicators of provisioning services. Carbon storage/sequestration, regulation of water flow/water quality, erosion control, maintaining the soil fertility, etc are the regulating services associated with forest ecosystems. Assessment of the role of the Dibru-Saikhowa BR in the human well-being by the utilization of non-exhaustive and nonmaterial benefits derived from the reserve such as recreation/ecotourism, aesthetic and spiritual uses will be done to quantify cultural services associated with the biosphere reserve. Producers of environmental services are not usually compensated for providing these services; they tend to be undersupplied or are not supplied at all. PES programme are an effort to “get the incentive rights” by sending the accurate signals to both providers and users that reflect the real social, environmental and economic benefits that environmental services deliver. Potential of PES mechanism will be identify during the present proposed research project.</p> <p>Population residing in and around has to be surveyed through the structured questionnaires to know their dependency of the biosphere reserve. A comprehensive preliminary questionnaire has been prepared, which will be corrected after the reconnaissance survey. Information regarding the tourism related with DSBR will also be gathered from the forest department officials.</p>

3.	Ecological studies on <i>lepidoptera</i> in evergreen forests of Upper Assam. Project Code: RFRI/2015-16/E&B-1 Project not started till date	Dr. A.P. Singh Scientist -E	Project not started till date
4.	Standardization of nursery techniques of selected wild fruit-plants of North East India for their effective conservation and development of value added products for inclusive growth. Project Code: RFRI/2015-16/BIK-1	Dr. T.N. Manohara Scientist -D	Field survey tours were conducted in many forest areas, wood lands, homesteads etc of Jorhat, Golaghat, Sivasagar Districts of Assam and Tura Districts of Meghalaya to locate the plants in different places and to collect propagules- stem cuttings, root cuttings, fruits, seeds, herbarium samples, soil samples etc. Recorded phonological information and traditional knowledge associated with utilization of the species from the local communities. Recorded GPS readings of the areas. Nursery has been established at RFRI campus. Seed germination studies were following different treatment-hot water, cold water and hormones like GA3, Kinetin, Ethrel etc of different concentration were done. Stem cuttings were applied with rootex hormone and planted in the nursery.
5.	Studies on changes in Soil Quality and Carbon Buildup under different land use systems in Nagaland. Project Code: RFRI/2015-16/SFM-2	Dr. Gaurav Mishra Scientist -B	In order to study the depth of research, literature survey on assessment of soil quality status of Nagaland state was done. Limited information is available regarding the deterioration of soil quality due to <i>jhum</i> cultivation. A preliminary reconnaissance survey from 31-08-2015 to 04-09-2015 was conducted in Kohima district of Nagaland to assess the status of soil degradation. Four villages of Kohima district were surveyed. It was noticed that farmers started practicing terrace farming instead of <i>jhum</i> to check the soil loss. A discussion with the Chairman of Khonoma Nature Conservation & Tragopan Sanctuary (KNCTS) Trust, Khonoma was made regarding the benefits of terrace farming practice. He told that out of 11 districts of Nagaland, farmers from Kohima and Phek districts are practicing the same to conserve the top soil from erosion and degradation. For sampling, grids points have been decided for Mon and Zunheboto districts with the help of Geoinformatic lab, RFRI. Therefore, a thorough investigation on the assessment of soil quality under different land use systems will be undertaken in order to achieve the set objectives.
6.	Assessment, documentation and characterization of lichen diversity in Mizoram, Northeast India. Project Code: RFRI/2015-16/ARCBR-2	Shri Sandeep Yadav Scientist -B	Literature related to lichens is being collected and reviewed. Lichen samples are being collected from villages near to Aizwal.
7.	Isolation and study the efficiency of <i>Arbuscular mycorrhizal</i> fungi, phosphate and potash solubilizing bacteria in enhancing productivity and nutrient status of degraded soil under shifting cultivation of Karbi Anglong, Assam. Project Code: RFRI/2015-16/FP-1	Dr D. Dutta Scientist -B	Based on the objectives of the project study on the status of availability of AMF, PSM and KSB will be conducted in selected sites and adjacent undisturbed forest of Karbi Anglong, Assam. Isolation of AMF, PSB and KSB will be made and efficacy of different strains will be determined through pot culture in selected crops. The efficient combinations of the inoculants with the crop will be transferred to the field. Out of the two sites

			Silonijan and Bagori surveyed for the project bagori has been found suitable for conduction field experiment. Soils and root samples were collected from the fields surveyed. Root samples are processed for the presence of AMF infection. Field soil samples are being examined for its AMF, PSB and KSB population and physic-chemical study.
8.	Studies on nurseries diseases of economically important tree species of Mizoram and their management. Project Code: RFRI/2015-16/ARCBR-1	Sh Hans Raj Scientist -C	Conducted field survey and assed the diseases incidence in the nurseries of E&F Department in Kolasib and Aizawl district of Mizoram (3 locations in each district). Data were recorded on the incidence of nursery diseases of selected tree species. During the survey the diseased sample including seed of selected tree species from nursery were brought from the field to isolate the pathogen(s). Pathogenicity of one major diseases of <i>Michelia champaca</i> has also been proved. Isolation of indigenous <i>Trichoderma</i> strains were carried out from forest soil, which will be evaluated for their biogenic sensitivity after confirmation of the pathogen(s). Review of literature of nursery diseases of selected tree species and recruitment of project assistant and field labour in the project
9.	Mycological investigations on diversity and ecological status of Bambusicolous macro-fungi in Upper Assam. Duration: 2 years, 2015-2017 Project Code: RFRI/2015-16/SFM-1	Dr. VipinParkash Scientist-D	<p>Survey was done to visit 3 local sites at Jorhat district, Assam and collected 10 bambusicolous macro-fungal samples.</p> <p>Host-fungus relationship was worked out for the collected samples. One sample was found to be Ectomycorrhizal (EcM) and the study on it is under progress.</p> <p>Microscopic photography of all collected samples was done and the accessions were applied.</p> <p>Identification was carried out with the help of available literature and manuals and also from Enet help.</p> <p>The Isolation of EcM was done and the experiment is under process.</p> <p>Literature survey from journal and online publications is being carried out.</p> <p>Requisition of stationary items and chemicals and glassware was prepared and submitted to store office.</p>